

“Bits & Pieces” by Lindsay Gibbs

Profiling your camera

Believe it or not all cameras have colour errors. Most of the time this doesn't matter as the errors are slight but if you are unhappy with your prints then read on.

There are a number of reasons for these errors:

- 1 the manufacturer has “skewed” the colours to favour a particular scene type
- 2 the saturation has been pushed to “jazz-up” your photos
- 3 luminance variations

If you want to see how good/bad your camera is then simply Google “imatest model” where “model” is the model-number of your camera. The “imatest” (**image test**) for two common cameras are shown in fig.1 & fig.2. The lines represent colour errors and are different for both cameras.

The camera I am using for this article is a Panasonic TZ10. The “imatest” (fig 1) for the TZ10 shows that “orange, magenta, cyan, & green” need a tweak.

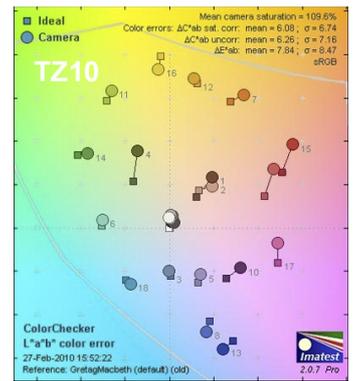


Fig 1

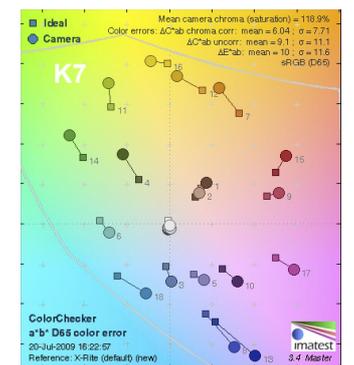


Fig 2

I will now describe a rough and ready way to improve the images from any camera. While not perfect (the method is subjective) your images should look better.

Step One (create some test files)

- 1 First profile your monitor. If you don't have access to profiling hardware then at least calibrate your monitor using “Adobe Gamma” or “Monitor Calibration Wizard” (freeware). An excellent site which explains all, and has links to the freeware software, is <http://www.northlight-images.co.uk/viewing.html>
- 2 Create a Gretag Macbeth Chart (“gretagmacbeth.jpg”) using Photoshop CS3 or higher. The “L.a.b” values for each colour are shown on the chart (fig 3).
- 4 Create a pure white image called “white_balance.jpg”
- 5 “Custom white balance” your camera while displaying “white_balance.jpg” on your screen
- 6 Take a photo (screen-shot) of “gretag_macbeth.jpg” and label it with your camera-name (i.e. “panasonic_TZ10.jpg”)

Step Two (fix the hue/saturation)

- 1 Open “gretag_macbeth.jpg” in Microsoft Windows “Pix & Fax Viewer”
- 2 Open “panasonic_TZ10.jpg” in “Photoshop CS3”. Reduce (“Restore Down”) the screen size of both programs and reposition each so that both images are visible simultaneously.
- 3 Using “Levels” move the black and white points for “panasonic_TZ10.jpg” to each



Fig 3

end of the histogram

- 4 Open “hue/saturation” and adjust each of the “red, yellow, green, cyan, blue, & magenta sliders” until the “hues” for each patch match. Don't worry to much about the brightness ... just concentrate on the colours.
- 5 Record the “hue” & “saturation” values for each colour (fig 4)

Colours	Hue	Sat.
Reds	0	0
Yellows	3	2
Greens	0	7
Cyans	0	10
Blues	0	0
Magenta	-13	15

Fig 4

Step Three (fix the luminosity)

- 1 Press “Ctrl, Alt, Shift, E” simultaneously (i.e. Stamp Visible)
- 2 Set the blending mode to “Luminosity”
- 3 From the drop down menu select “Image>Adjustments>Black & White” and adjust the “red, yellow, green, cyan, blue, & magenta sliders” until the colour patches for each image match
- 4 Record these values (fig 5)
- 5 Press “Ctrl, Alt, Shift, E” simultaneously (i.e. Stamp Visible)
- 6 Rename the top layer “Panasonic_TZ10 profile”
- 7 Delete all layers between the top layer and the background layer

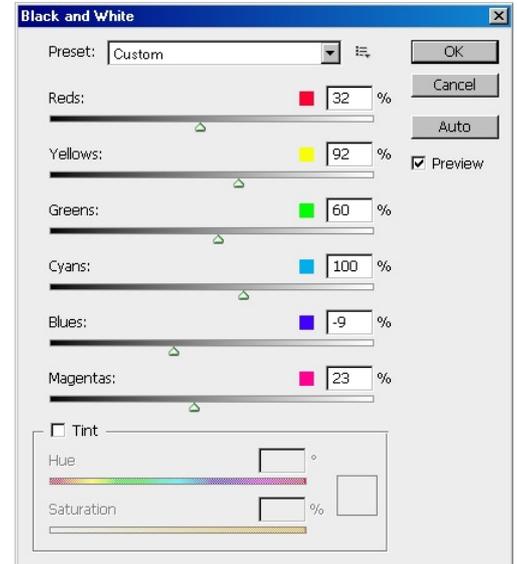


Fig 5

Step Four (creating an action)

- 1 Close CS3 and reopen “panasonic_TZ10.jpg” and repeat Step Two 3 above
- 2 From the drop down menu select “Window>Actions”
- 3 Click the “start” button at the bottom of the action screen
- 4 Give your action a name (Panasonic TZ10 Profile) and assign a function key (F12)
- 5 Click the “Record” button (fig 6)
- 6 Repeat Step Two 4 through Step Three 7 but this time insert the values you previously recorded (refer fig 4).
- 7 Click the “stop” button. Your “action” should resemble fig 7.

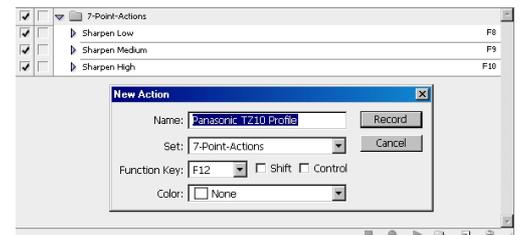


Fig 6

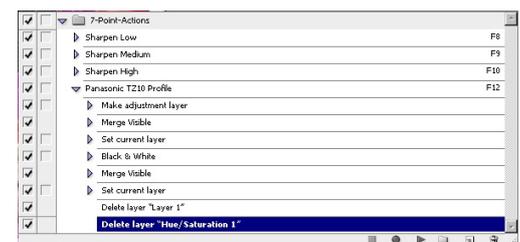


Fig 7

To use this “action” simply open an image in Photoshop CS3, check your levels, and press F12 ... done :)

Fig 8 shows a typical “before and after” image for the “TZ10”. Notice how the colour errors have been reduced and the image has lost that “washed-out” look.

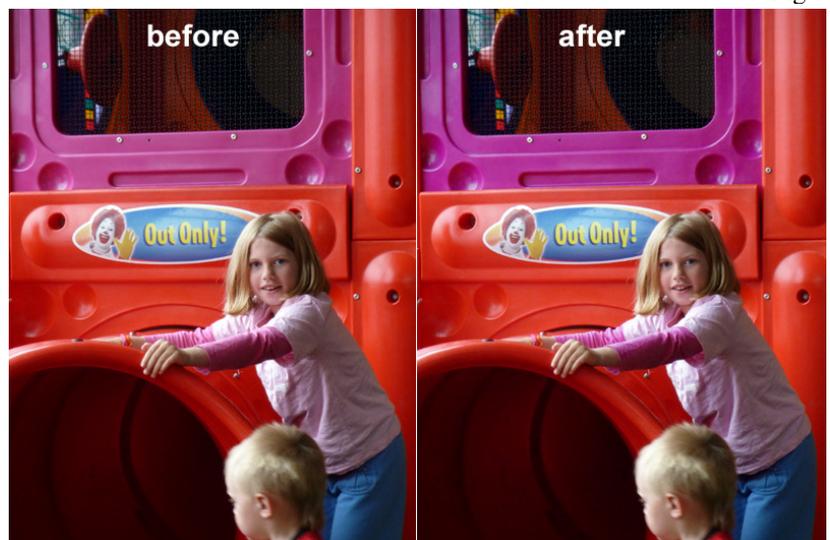


Fig 8